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Fact Sheet 2

Testing Underway

Testing is underway to evaluate California Phase 2 Reformulated Gasoline (cleaner-burning gasoline) in gasoline-powered motor vehicles and equipment. The purpose of this testing is to evaluate the performance and compatibility of cleaner-burning gasoline before it is introduced statewide in June 1996.

California Air Resources Board-Sponsored Test Program

The California Air Resources Board (ARB) Test Program will evaluate on-road and off-road vehicle fleets and equipment fueled with cleaner-burning gasoline. For comparison, control vehicles will operate on conventional unleaded gasoline. This test program is a cooperative effort between government and industry. Between February and August 1995, researchers will:

- Conduct periodic "under-the-hood" vehicle fuel system inspections
- Collect data to monitor vehicle fuel economy
- Monitor vehicle emissions (selected vehicles)
- Investigate vehicles and components with any fuel-related problems. A Technical Review Panel, consisting of representatives from the automotive and oil industries, automotive trade organizations, the ARB, and the California Bureau of Automotive Repair, will evaluate problem vehicles or equipment.

On-Road Test Fleets

The on-road test fleets are comprised of a wide variety of vehicles including:

- Over 800 light and medium-duty vehicles fueled with cleaner-burning gasoline
- Over 600 light and medium-duty vehicles fueled with conventional gasoline
- Early through late model year vehicles
- Low through high mileage vehicles
- Northern and southern California vehicles from the City and County of Sacramento, CalTrans, Bank of America, GTE California, Pacific Bell, and California State University, Fresno.

Off-Road Vehicles and Equipment

The ARB is working with equipment operators to test a variety of off-road vehicles and equipment using cleaner-burning gasoline including:

- Farm, Utility, Lawn and Garden Equipment—Maintenance staff at California State University (Fresno), will be using test fuel in agricultural equipment, lawn mowers, edgers, blowers, garden tractors, and other equipment.
- Industrial/Construction Equipment—Testing is planned for generators, forklifts and other equipment at California State University (Fresno) and Caltrans.

Test Fuel

Over 500,000 gallons of cleaner-burning gasoline test fuel will be produced and delivered to over 12 northern and southern California test sites (see specifications in table on the back of this sheet).

Manufacturer-Sponsored Testing Programs

Automobile and other equipment manufacturers are testing cleaner-burning gasoline in a variety of on-road and off-road vehicles and equipment including:

On-Road Vehicles

- General Motors—Engineers are testing material compatibility with a variety of cleaner-burning gasoline blends to evaluate the effects on fuel system components.
- Ford—Researchers will be testing six blends of cleaner-burning gasoline to study lubricity effects in fuel pumps, fuel injectors, and other fuel system components used by original and aftermarket equipment manufacturers.

Off-Road Vehicles and Equipment

- Marine Engines—Mercury Marine will test a variety of pleasure crafts including outboard, inboard, and inboard-stern drive models.
- Motorcycles—Harley-Davidson is planning to conduct testing on on-road motorcycles.
- Snowmobiles—Manufacturers are planning to test in-use fleets.
- Utility, Lawn and Garden Equipment—Briggs & Stratton Corporation and Tecumseh Products Company have completed laboratory and field testing. Preliminary findings from these tests show no fuel-related problems.
- Portable Equipment—The Portable Power Equipment Manufacturers Association will be testing engines on chain saws, trimmers, and blowers for several engine manufacturers in Sweden, Germany, Japan and the U.S.

Other Testing of cleaner-burning gasoline

- Federal Express CleanFleet Study—Researchers from the Battelle Memorial Institute recently completed a comprehensive side-by-side evaluation of Federal Express delivery vans operating in southern California on alternative fuels, including cleaner-burning gasoline. Preliminary findings show no fuel-related problems. For more information, contact Helen Latham of Battelle at (614) 424-4062.
- Texaco is evaluating the potential for testing low-aromatic blends of cleaner-burning gasoline in their company fleet in Bakersfield, California.

California RFG Test Fuel Specifications

Oxygenate -----	MTBE
RVP, psi	
Summer -----	6.5-6.9
Winter -----	11.5-12
Aromatic, v.% -----	18-20
Olefins, v.% -----	3.0-5.0
Sulfur, ppm-----	15-25
Benzene, v.% -----	0.5-1.0
T50, °F -----	190-210
T90, °F -----	280-300
Oxygen. wt.% -----	1.8-2.2

(These values represent ranges for blending tolerance around regulatory values.)

Phillips 66 Company is blending fuel for the ARB-sponsored test program to meet these specifications.